

City Specification

No. 402

Reference to HBFC Section 2208
& NFPA Standard 52, Chapter 10

Huntington Beach Fire Department

Compressed Natural Gas Residential Fueling Facility

All residential fueling facilities shall be installed and operated in compliance with the applicable provisions of this City Specification. Units and related equipment shall conform to all applicable electrical, plumbing, mechanical, fire, and other related codes and standards. Operation of residential Compressed Natural Gas (CNG) fueling facilities shall be limited to the filling of permanently mounted fuel containers on CNG powered vehicles.

REQUIREMENTS

1. APPROVAL CONDITIONS

- 1.1 Prior to installation, all required permits shall be obtained through the City of Huntington Beach Building & Safety Department (Building Department) for electrical, plumbing, and mechanical work.
- 1.2 Three (3) sets of plans shall be submitted to the Building Department for approval. Plans must be approved by both Fire and Building Departments.
- 1.3 The unit must be installed, calibrated, and maintained by qualified personnel in compliance with the National Fire Protection Association (NFPA) Standard 52, Chapter 10, and the manufacturer's instructions.
- 1.4 The unit shall have a permanent manufacturer's nameplate marked with minimum and maximum gas inlet pressure and flow rate, gas outlet maximum pressure, and electrical requirements.
- 1.5 "No Smoking" label and/or signage shall be provided, affixed, and maintained per the manufacturer's recommendations.
- 1.6 Operating instructions shall be readily visible and provided on the unit describing the normal operating procedures.
- 1.7 "Emergency Shut-Down Procedures" shall be readily visible and provided on the unit.
- 1.8 The unit shall be seismically restrained per manufacturer's instructions.

Compressed Natural Gas Residential Fueling Facility

- 1.9 The electrical receptacle supplying power to the unit shall be a minimum 5 feet away, but no more than 7 feet from the equipment. This receptacle shall be supplied from a dedicated branch circuit, protected by 20 amp GFCI breaker.
- Hard-wired units are allowed as long as they are installed per electrical code conditions for flammable environments, and connected through a 20 amp GFCI breaker. All units must be grounded.
- 1.10 Noise level of operation shall not exceed 50 dB(A) at a distance of 16 feet from the unit.
- 1.11 The unit shall be installed 5 feet above ground level to protect it from vehicle impact. Outdoor or floor-mounted units are allowed when supplied with adequate crash protection (crash bollards or equivalent).
- 1.12 Clearance of 12 inches shall be maintained around the unit and 24 inches in front of the unit.
- 1.13 Where it is necessary to install the unit indoors, it shall be mounted or otherwise located such that the unit is vented outdoors.
- 1.14 Each vent shall terminate not less than 3 feet from any opening into the building in every direction and not less than 3 feet from any lot line, alley, or street.
- 1.15 Where the unit or the vehicle being fueled is located indoors, a gas detector set to operate at 20 percent of the lower explosive limit of natural gas shall be installed in the room.
- The detector shall stop the compressor when activated.
 - The detector shall have an audible and visual notification alarm when activated.
 - The detector's audible alarm shall be at least 15 dB(A) above the ambient noise level.
 - The detector's visual notification shall have a minimum of 15 candela output.
 - The detector shall be installed within 6 inches of the ceiling or the highest point in the room.
 - The detector shall be directly connected to the CNG unit.
- 1.16 Automatic shutdown of the unit shall immediately follow the activation of any pressure relieving device or gas detection device. Means shall be provided to prevent the equipment from automatically restarting when the cause of failure is repaired. The unit shall only be restarted manually.

Compressed Natural Gas Residential Fueling Facility

- 1.17 Owner shall keep a maintenance record and shall be responsible for maintaining the equipment. Maintenance shall be per the manufacturer's recommendations.
- 1.18 All parts and components subjected to gas pressure shall be capable of withstanding the maximum pressure to which they will be subjected.
- 1.19 The discharge hose of the unit shall break away from the compressor when pulled by force not to exceed 150 lbs.
- 1.20 All pressure sensing and pressure relief devices shall be set and sealed at the factory. Field adjustable settings are not permitted.
- 1.21 CNG system components not part of a listed CNG unit shall be:
- Listed by an approved testing laboratory for the particular application.
 - Capable of handling the maximum normal load without causing a risk of fire or electrical shock.
- 1.22 A component, when replaced, shall be of the identical original manufacturer's part approved by the testing agency.
- 1.23 If the unit is no longer in service, it shall be disconnected and removed by qualified personnel within 90 days.
- 1.24 Multiple CNG units are allowed to be installed in the same area provided each unit has its own separate ventilation system, and the units are not manifolded together on the output sides.
- 1.25 Components of outdoor CNG facilities, including any pressure regulating devices, shall be designed and installed so that their operation will not be affected by weather, mud, or debris

APPROVED: Original Signed
Duane S. Olson, Fire Chief

DATE: November 17, 2008